



Российский  
научный  
фонд

**X Международная конференция молодых  
учёных по химии  
«МЕНДЕЛЕЕВ-2017»  
II школа-конференция «Направленный  
дизайн веществ и материалов с заданными свойствами»**



**Сборник тезисов  
докладов**

**4-7 апреля 2017 г.  
Санкт-Петербург**

# THE SYNTHESIS OF NEW DICARBOXYLATE PHOSPHOBETAINES ON THE BASIS OF 3-(DIPHENYLPHOSPHINO)PROPIONIC AND CINNAMIC ACIDS

*Morozov M.V., Minnullin R.R., Galkina I.V., Galkin V.I., Bakhtiyarova Yu.V.*

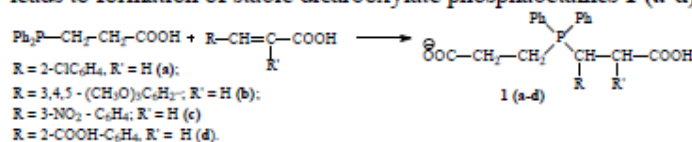
Kazan Federal University

Kazan, Russia

Student

morozov240995@mail.ru

Interaction of 3-(diphenylphosphonio)propionic acid with unsaturated derivatives of cinnamic acids leads to formation of stable dicarboxylate phosphobetaines **1** (a-d).



Novel synthesized dicarboxylated phosphobetaines **1** (a-d) are not soluble in water and in most organic solvents which makes it difficult to perform NMR studies. In order to establish the structure of synthesized compounds dicarboxylated phosphobetaines were included in reaction with 0.1 M solution of the hydrochloric acid. As a result phosphonium salts were isolated and characterized **2**(a-d). The structure of compounds was proved by IR, <sup>1</sup>H NMR, <sup>13</sup>C NMR and <sup>31</sup>P NMR spectral studies. Results of X-ray diffraction analysis were received for phosphonium salt **2c** (Fig.1).

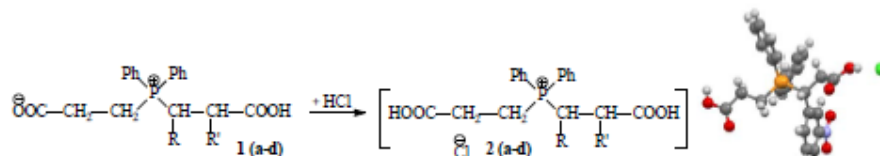


Figure 1. Molecular structure of (2-carboxy-1-(3-nitrophenyl)ethyl)(2-carboxyethyl)diphenylphosphonium chloride **2c**

*This work was funded by the subsidy allocated to Kazan Federal University for the state assignment in the sphere of scientific activities.*